

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-10. (canceled)

11. (new) A slide feeding unit for a microscope, comprising:

a magazine for receiving slides; said magazine including:

a base plate;

two end walls;

a side wall;

an open side;

a toothed rack secured externally to said side wall and being perpendicular to said base plate; and

slide guiding elements oriented perpendicularly to said open side;

a magazine moving mechanism including:

a trough for receiving said magazine in a fitting relationship with said base plate and said end walls; said trough having opposite side plates, with one of said side plates being provided with openings;

a first shaft disposed externally of one of the side plates, and extending therealong and parallel thereto;

first drive means for rotating said first shaft;
feeding gears rotatably supported in respective
said openings of said side plate and being adapted to mesh with
said toothed rack for advancing said magazine in a direction of
advance;

said first shaft including first driving worm
gears adapted to mesh with said feeding gears;

a pair of shafts rotatably supported by said
trough and extending along said side plates respectively;

second drive means for rotating said pair of
shafts;

lifting gears rotatably held in said side plates
and having inner faces substantially coplanar with an inner
surface of said side plates; each lifting gear having two pins
arranged at opposite ends of the lifting gear diameter and
oriented perpendicularly to said inner face of the respective
lifting gear; and

second driving worm gears rotated by said pair of
shafts and meshing with said lifting gears; and

a slide feeding device traversing said trough and
including:

a robot arm displaceable perpendicularly to said
direction of advance of said magazine for removing a slide from
said magazine; and

third drive means for moving said robot arm.

12. (new) The slide feeding unit according to claim 11, wherein the magazine moving mechanism is arranged in a backward tilted position, the base plate making an angle of about 10 to 45° with respect to a horizontal plane.

13. (new) The slide feeding unit according to claim 11, wherein said slide guiding elements comprise rails disposed on said base plate of said magazine.

14. (new) The slide feeding unit as defined in claim 11, wherein said third drive means comprises a motor and a control spindle rotated by said motor.

15. (new) The slide feeding unit according to claim 14, wherein the third drive means further comprises a limit switch coupling said motor to said control spindle.

16. (new) The slide feeding unit according to claim 15, wherein said motor has a motor shaft; and said limit switch includes:

a sleeve affixed to said motor shaft;

a helical spring wound externally on said sleeve and having a bent-out terminus; and

a driven disk force-transmittingly coupled to said bent-out terminus and connected to said control spindle.

17. (new) The slide feeding unit according to claim 11, wherein said robot arm comprises front and rear arms for moving the slides.

18. (new) The slide feeding unit according to claim 11, wherein said slide feeding device comprises a hold-down plate for clamping the slides; said hold-down plate being secured to said robot arm for executing rocking motions with respect to said robot arm.

19. (new) The slide feeding unit according to claim 18, further comprising dogs secured to said robot arm for controlling motions of said hold-down plate.

20. (new) The slide feeding unit according to claim 11, wherein said magazine moving mechanism further comprises rails attached to said side plates of said trough for vertically guiding said magazine.